Impulsive Buying and Overspending Patterns in Q-Commerce: A Study of Generation Z Consumers in Tier-1 Indian Cities

Synopsis of the Research Proposal Submitted for the Registration in the

Ph.D. Program (Part-Time)
in
Management

By

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(Enrolment No 25JPPHNDMS006)

Under Supervision of

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Index

S. No.	Section Title	Page No.
1	Abstract / Executive Summary	3
2	The Rise of Quick Commerce in India	4
3	Generation Z: The Primary Q-Commerce Consumer	6
4	Research Motivation and Significance	7
5	Role of Social Media in Consumer Behaviour	7
6	Influence of UPI and Digital Payments	7
7	Impulse Buying: Conceptual Foundations	8
8	Q-Commerce as an Impulse Buying Environment	9
9	Micro-Transactions in Digital Contexts	9
10	Pain of Payments and Digital Attenuation	10
11	Generation Z Consumer Psychology	10
12	Identified Research Gaps	11
13	Central Research Problem	12
14	Research Objectives	12
15	S-O-R to S-O-B-C Model Evolution	13
16	Components of S-O-B-C Model	13
17	Construct Definitions and Structure	13
18	Structural Model Description	15
19	Stimuli (Independent Variables)	16
20	Organism (Mediating Variables)	16
21	Behaviour Variable	17
22	Mediators	17
23	Dependent Variable	17
24	Stimulus → Organism Hypotheses	17
25	Organism → Behaviour Hypotheses	17
26	Behaviour → Consequence Hypotheses	17
27	Questionnaire Design	19
28	Construct-wise Measurement Items	19
29	Research Philosophy and Approach	20
30	Research Design and Target Population	20
31	Survey Instrument and Pilot Study	20
32	Descriptive and Preliminary Analysis	21
33	Measurement Model (PLS-SEM)	21
34	Structural Model Evaluation	21
35	Conclusion	21
35	Activity Schedule (36 Months Plan)	22
36	Gantt Chart	23
37	References	24-25

1.1 Abstract / Executive Summary

The phenomenal growth of Quick Commerce (Q-Commerce) in urban India, with examples of Blinkit, Zepto, and Swiggy Instamart, has radically changed consumer buying behaviour, shortening decision-making time to minutes and making impulsiveness the new standard of interaction. India's Q-Commerce sector, estimated approximately USD 3.3 billion in 2024 and projected to reach USD 5 billion by 2025 (growing at an estimated 27.9% CAGR between FY2022 and FY2027), has undergone a structural change from a singular centralised supply chain to micro-fulfilment centres of 1,500–2,500 sq. ft. strategically integrated within dense urban vicinity— enabling 10 to 45-minute delivery windows (Ranjekar & Roy, 2023). This Framework-supported speed, combined with seamless UPI payment, System-generated FOMO, and Micro-incentive systems, has created an environment responsive to impulsive buying behaviour.

This PhD research proposal focuses on impulsive buying behaviour and its subsequent effect of overspending among Gen Z consumers (born between 1997 and 2012) in the large Indian metropolitan regions. Being digital natives, Gen Z consumers, are the most enthusiastic adopters of Q-Commerce, and it has been determined that it is the primary target group, namely, the young generation, time savers, convenient seekers and one of the most financially vulnerable to its behavioural design architecture (Ranjekar and Roy, 2023). Q-Commerce platforms are designed in a manner to cater to the consumer unplanned purchases segment, which is characterised by emergency purchases and fulfilment of demand instantaneously, making impulsive buying as a design goal, not as a peripheral phenomenon.

The theoretical foundation of this research is the Extended Stimulus -Organism-Behaviour-Consequence (S-O-B-C) model that is the extension of the traditional Stimulus-Organism-Response (S-O-R) paradigm, by explicitly differentiating between individual behavioural actions and their overall financial consequences.

Two critical mediating variables are proposed: Micro-Transaction Accumulation, defined as the habitual engagement in high-frequency, low-value add-on transactions that collectively generate significant financial outflow; and Pain of Payments Attenuation, the progressive reduction in psychological Spending Guilt enabled by seamless UPI payment

The proposed study has four novel scholarly contributions: (1) it is the first study to situate the S-O-B-C model in the context of Q-Commerce in India; (2) it operationalises the phenomenon of micro-transaction accumulation and payment pain attenuation as two mediating variables between impulsive buying and overspending; (3) it provides Generation Z-specific findings on the behavioural economics of the Q-

Commerce in an emerging market; and (4) it also provides actionable recommendations to platform developers, consumer protection regulators, and financial literacy practitioners in India

2. Introduction

2.1 The Rise of Quick Commerce in India

The Quick Commerce, which is the delivery of daily consumer products in ten to thirty minutes of ordering, is one of the most disruptive retail innovations in the post-pandemic business environment in India. Applications like Blinkit (previously Grofers, purchased by Zomato), Zepto, Swiggy Instamart, and BigBasket Now have universally altered the purchasing of groceries and daily essentials in cities as a planned, periodic action to a behaviour of impulse buying. The Q-Commerce industry in India is estimated to grown at an astonishing rate of 10-15 times in the period between FY 2022 and FY 2027 as it is recorded by Ranjekar and Roy (2023) in their seminal IIM Ahmedabad working paper on the Q-Commerce business models. The infrastructure requirements that the industry is projected to grow to USD 0.3 billion to USD 5 billion in the period between FY 2022 and FY 2027.

The dark store, a micro-fulfilment centre of about 1,500-2,500 sq. ft. and a 1,500-2,500 SKU capacity, located strategically in the dense urban neighbourhoods and capable of handling orders within five minutes to facilitate last-mile delivery in 20-45 minutes, is the structural backbone of Q-Commerce (Ranjekar and Roy, 2023). This infrastructure represents a paradigm shift between the big, centralised warehouses (≈ 40,000 sq. ft. and 50,000-100,000 SKUs) of the traditional e-commerce, and an architectural choice to be committed to immediacy. The major rivals of Q-Commerce in India are Zepto (10 minutes delivery), Blinkit (10-30 minutes), Swiggy Instamart (15-30 minutes), and Dunzo (20 minutes) which compete against each other through the speed of delivery and features of the platform.

Q-Commerce supply chain works on the principles of three interconnected levels: a mother warehouse that is used as the collection centre of goods delivered by retailers, farmers, and wholesalers, a network of distribution centres and dark stores that maximise customer proximity, and last-mile delivery done with the help of two-wheelers, electric scooters, and bicycles adapted to the dense urban environment (Ranjekar and Roy, 2023). This infrastructure is controlled by technology-supported Order Management Systems (OMS) which route orders, real-time inventory management and data-driven demand-estimation models to predict high-demand products, order quantities, and seasonal trends - enabling sub-minute order processing.

In contrast to the conventional e-commerce systems, which give the consumer time to think, shop, read reviews, and re-evaluate, Q-Commerce systems are designed in such a way that the buyer decision process

is reduced to less than two minutes. Delivery time counts, algorithmically selected Top Picks sections, push notifications about flash deals, or instant UPI checkout all create the sense of continued urgency. Table below (adapted by Ranjekar and Roy, 2023) puts Q-Commerce in the larger context of consumer purchasing modes with its unique value proposition of on-demand ordering and instant delivery that targets the young generation, internet users, and time savers.

Store Type	Major Value Proposition	Target Consumer	Fulfilment Time
Local Kirana	Trust, Familiarity, Local Products	Old loyal customers, Housewives	Self-paced
Retail Supermarket	Discounts, Wide Variety, Convenience	In-store shopping preference	Self-paced
Traditional E-Commerce	Convenience, Doorstep Delivery, Discounts	Internet-using, convenience-seeking customers	1 to 3 days
Quick Commerce	On-demand ordering, Instant delivery, Doorstep delivery	Young generation, Internet users, Time savers	10–45 minutes

Table 1: Consumer purchasing modes and value propositions in Indian retail (Adapted from Ranjekar & Roy, 2023)

The fast growth in Q-Commerce has been concomitant with the evolution in the consumer buying strategies. Ranjekar and Roy (2023) distinguish between the three types of grocery consumer purchase strategies: (1) Stock-up purchases- bulk purchases to be used over an extended period of time via supermarkets and kirana stores; (2) Top-up purchases- purchases that are used on a daily basis (eggs, milk, and vegetables) via local stores and e-commerce platforms; and (3) Unplanned purchases- purchases that are required unexpectedly via Q-Commerce platforms. This taxonomy makes Q-Commerce institutionally tailored to the unplanned purchase segment - it does not represent an unintended by-product but a structural attribute of its business model. The resulting consequences to the financial wellbeing of consumers, specifically financially immature Gen Z consumers, are far reaching and should be immediately explored in academic research.

2.2 Generation Z: The Primary Q-Commerce Consumer

The majority of Q-Commerce platforms in India are dominated by generation Z consumers who are broadly defined as people born between 1997 and 2012 and are currently aged between 13 and 28. Ranjekar and Roy (2023) clearly defined them as the main target consumer group of Q-Commerce, along with internet users and time savers. This generation is defined by being digital natives, having spent their entire lives with smartphones and social media being inseparable aspects of their lives; increased vulnerability to visual and social stimuli, such as influencer endorsements and peer-approved social proof; a tendency towards

immediacy and experiential satisfaction; an emerging but developing financial literacy; and unparalleled exposure to gamified online space.

The study of the financial behaviour of Generation Z demonstrates a paradoxical picture: Generation Z is highly interested in financial freedom and wealth building, and at the same time, has a high level of impulse purchases, credit card debts, and financial regrets, especially in online retailing. Within the Indian urban context, the consumers of Generation Z are experiencing a conflict between aspirational consumption that is brought about by lifestyle indicators mediated by social media and limited income status of students and early-career professionals. The fact that the concentration of Q-Commerce use is found in Tier-1 Indian cities, such as Delhi-NCR, Mumbai, Bengaluru, Hyderabad, Chennai, Pune, and Kolkata, which also have the highest rates of Gen-Z digital activity and the most extensive Q-Commerce infrastructure, gives a distinctly concentrated environment in which to study the susceptibility of this demographic to Q-Commerce induced overspending.

Generation Z is selected as the focal population for this study due to its higher digital immersion, greater susceptibility to impulsive and emotion-driven consumption, and increased financial vulnerability compared to Millennials. Reports from Deloitte, McKinsey, PwC, and EY consistently indicate that Gen Z consumers exhibit stronger engagement with app-based ecosystems, higher responsiveness to instant gratification, and greater participation in high-frequency, low-value transactions. These characteristics align closely with the behavioral dynamics of q-commerce platforms, making Generation Z a more appropriate and theoretically relevant sample for examining impulsive buying and overspending patterns.

Q-commerce is growing at ~40% annually, but Gen Z—not Millennials—will dominate by 2030 due to higher population share, $1.3 trillion consumption power, and higher frequency of small purchases, which directly aligns with impulsive buying and overspending behavior.

2.3 Research Motivation and Significance

The combination of the behavioural design architecture of Q-Commerce, the psychological profile of Gen-Z, and the fast-digitising UPI payment environment in India creates a highly promising but under-researched area of study of impulsive buying and overspending. This dynamic is further enhanced by the social media ecosystem; according to the report by Ranjekar and Roy (2023), the social media platforms like Instagram, YouTube, Facebook, WhatsApp, and Moj are filled with Q-Commerce ads and influencer content that promotes online shopping, thus, they can be perceived as externally induced stimuli that activate the intentions to buy impulsively even before a consumer opens a Q-Commerce app.

The current body of work on impulse buying has been mainly centered around either conventional e-commerce (Ngo et al., 2024) or live streaming commerce (Lee et al., 2025), thus leaving Q-Commerce as a contextually unique and theoretically unexplored form of retail. Furthermore, the contribution of micro-transaction accumulation, which involves frequent, individually small-cost purchases that cumulate to high financial outflow, and the pain of payments attenuation, a psychological process which is uniquely inhibited by the integration of frictionless UPI, has been no systematically considered in the Indian Q-Commerce setting. As a result, the given proposal aims at filling a scholarly and policy gap.

3. Social Media in the Indian Q-Commerce Context

Social media holds inherently unique role in the Indian consumer behaviour ecosystem, acting as both an aspirational content platform, a product search engine and a social proof mechanism, as well as, increasingly, a direct commerce channel. As of 2024, India has more than 750 million active participants in the digital social environment, which includes Instagram, YouTube, WhatsApp, Moj, ShareChat, and Josh, which has penetrated both metropolitan regions and the Tier-2/Tier-3 urban centres. Ranjekar and Roy (2023) have noted that the adoption of digital payment modalities by the Indian government in the form of the Unified Payments Interface (UPI) and RuPay has been a key catalyst in the growth of e-commerce, thus forming an ecosystem where product discovery via social media flows smoothly into the purchase completion enabled by frictionless UPI, with the quick-commerce (Q-Commerce) platforms being the main beneficiaries.

The prevalence of Q-Commerce platforms can be supported by the fact that there are large investments in influencer marketing campaigns in Instagram and YouTube, where food and lifestyle creators show how convenient it is to order in ten minutes, and on-demand purchasing has become a new lifestyle norm. WhatsApp promotional broadcasts, Instagram stories with flash deals, YouTube Shorts with product discoveries all serve as external stimuli, which precondition Generation Z consumers to making impulse purchases of Q-Commerce. The literature on empirical studies of social influence in online impulse buying supports the fact that peer reviews, influencer endorsements, and community dynamics increase arousal and pleasure among consumers, and social proof acts as a key validation mechanism that promotes impulsive spending (Hu et al., 2019).

The UPI ecosystem in India facilitated a volume of 14 billion monthly payments by 2024 has fundamentally changed the experience of payment. It is a fact that cash payments cause the greatest degree of psychological discomfort, and the abstract forms of payment alleviate the discomfort to a lesser degree, and thus, encourages higher spending, as the academic literature on the pain of paying (Prelec & Loewenstein, 1998)

confirms. UPI payments, which are instantaneous, biometric- or PIN-authenticated, and visually instantaneous payments, are at the extreme end of this abstraction spectrum, and may make the psychological cost of Q-Commerce purchases virtually invisible to Generation Z consumers who have been using this modality since their teenage years.

4. Literature Review

4.1 Impulse Buying: Conceptual Foundations and Digital Evolution

Impulse buying — broadly defined as unplanned, spontaneous purchasing triggered by external stimuli and internal psychological states without prior purchase intention — has been a central construct in consumer behaviour research since Stern's (1962) foundational taxonomy. The Stimulus-Organism-Response (S-O-R) framework has emerged as the dominant theoretical lens through which online impulse buying has been examined (Ngo et al., 2024; Lee et al., 2025). Arousal and pleasure have been consistently identified as the most critical mediating affective states, with time pressure and quantity pressure operationalised through flash sales and scarcity indicators shown to heighten arousal by exploiting FOMO (Zhu et al., 2018; Hamilton et al., 2019). The Stimulus-Organism-Response (SOR) model has also been applied in Q-Commerce contexts: Ariker (2021), using the SOR framework, assessed how information about delivery partner working conditions shapes consumer brand reputation and retail patronage intentions toward Q-Commerce ventures, demonstrating the framework's applicability to Q-Commerce consumer behaviour.

4.2 Q-Commerce as a Distinct Impulse Buying Environment

Quick Commerce is a retail setting which is conceptually different compared to general e-commerce and live-streaming commerce and which should be analyzed theoretically separately. According to Ranjekar and Roy (2023), Q-Commerce does not follow the traditional e-commerce in terms of several structural aspects: time to deliver (10-45 minutes versus 13 days), amount of inventory (around 1500-2500 SKUs versus around 500000 SKUs), fulfilment space (dark stores with a size of about 1500-2500 square feet versus large warehouses with a size of about 400000 square feet), and the main consumer behaviour (instant These architectural differences create a qualitatively different impulse buying context: as opposed to traditional e-commerce, Q-Commerce has 2-5 minutes purchase timelines due to the urgency cues of architectural elements and frictionless checkout; as opposed to live-stream commerce, impulse buying in Q-Commerce is not influenced by interpersonal dynamics but by the features of the platform design.

More importantly, despite the fact that Q-Commerce is a platform that deals with low-involvement, necessity-based products (typically everyday consumables, groceries, household necessities), the platform

architecture manages to induce impulsive purchases even in these categories (Ranjekar and Roy, 2023). According to survey data, 37 percent of Q-Commerce purchases in India were as of February 2022, 37 percent of Q-Commerce purchases in India are represented by last-minute essentials, 29 percent by all groceries, 23 percent by last-minute essential and indulgence items, and 11 percent by indulgence items, all of which confirm the prevalence of unplanned purchasing in the Q-Commerce purchase mix.

4.3 Micro-Transactions: From Gaming to Q-Commerce

The concept of micro-transactions was first introduced to the video game industry as a tool of enabling small, low-priced virtual transactions which, when summed up, result in significant cumulative spending.

Empirical studies of predatory monetisation in the gaming industry have described micro-transactions as psychological advanced mechanisms that use reinforcement mechanisms, lower the perceived cost of the individual purchases, and normalize the habitual spending on the low-value purchases (King and Delfabbro, 2018; Petrovskaya and Zendle, 2022).

Structural similarities between micro-transactions and Q-Commerce are analytically strong, since both are high-frequency, low-value transactions; require abstract digital payment systems; use gamified reward mechanisms like loyalty points and streak bonuses; and drive the habitual patterns of engagement that, although insignificant individually, have large aggregate financial effects.

To Gen Z consumers whose disposable income is restricted, the obscurity of micro-accumulation of micro-transactions is a very important channel by which impulsive buying behavior can be translated into overspending.

4.4 Pain of Payments: Theory and Digital Attenuation

The pain-of-paying hypothesis (Prelec and Loewenstein, 1998) posits that there is a psychological cost to every monetary transaction hence, this acts as a control to consumption habits. This regulatory impact is systematically dependent on the modality of payment, cash induces the most pain of payment, and digital technologies like UPI alleviate it by making the transactions invisible, instant, and routine.

Empirical studies of cashless payment formats in gambling scenarios prove that less concrete payment structures result in significantly greater spending intensity as a behavioural correlation can be directly projected onto Q-Commerce impulse-buying driving dynamics (Limbrick-Oldfield et al., 2022). The pain alleviation through the UPI integration in Q-Commerce is an effective platform-engineered process, which transforms sporadic, impulsive buying into chronic overspending, especially in the case of Generation Z consumers for whom UPI is a normalised and near-invisible payment experience.

4.5 Generation Z Consumer Psychology

Digital nativity, a high sensitivity to visual stimuli, which is developed through exposure to short-form, visually saturated media platforms, elevated responsiveness to social proof mechanisms and influencer recommendations, a strong present bias that is consistent with the immediacy of Q-commerce delivery services, and financial inexperience that makes this cohort vulnerable to accumulating micro-transactions and a lower sensitivity to the pain-of-payment make Generation Z consumer psychology.

Research on Gen Z financial behaviour reveals elevated rates of impulse spending and financial regret, particularly in digital retail contexts, making this cohort both uniquely susceptible to and uniquely important as a research subject for Q-Commerce impulse buying studies.

5. Statement of the Research Problem & Research Gaps

5.1 Identified Research Gaps

A systematic review of the extant literature, informed by the Q-Commerce industry landscape documented by Ranjekar and Roy (2023), reveals four critical and interconnected gaps that this research addresses:

Gap 1 — Contextual Gap: No published empirical study has systematically examined impulse buying and overspending specifically within the Q-Commerce context in India. Existing impulse buying research has focused on traditional e-commerce (Ngo et al., 2024) or live streaming commerce (Lee et al., 2025). However, Q-Commerce represents a structurally distinct retail format — with its dark store infrastructure, sub-30-minute delivery, ~1,500–2,500 SKU inventory range, and specific consumer segment (unplanned purchases by time-sensitive, convenience-seeking consumers) — that demands context-specific theoretical and empirical investigation. The IIMA working paper by Ranjekar and Roy (2023), while comprehensively documenting Q-Commerce business models and infrastructure, explicitly does not address the consumer behaviour consequences of this architecture, identifying it as a significant scholarly gap.

Gap 2 — Mechanistic Gap: The mediating pathways through which impulsive buying translates into chronic overspending — specifically through micro-transaction accumulation and pain-of-payment attenuation — have not been empirically investigated in any Indian retail context. The Q-Commerce business model, which inherently monetises frequent, low-value transactions through 1,500–2,500 SKU dark store inventories (Ranjekar & Roy, 2023), structurally incentivises micro-transaction patterns. Yet no study has examined how this habitual low-value purchase accumulation constitutes a distinct mediating pathway from impulsive buying to overspending.

Gap 3 — Payment Mechanism Gap: India's UPI ecosystem, which recorded over 14 billion transactions monthly as of 2024 and is identified by Ranjekar and Roy (2023) as a key policy driver of India's e-commerce growth, has fundamentally transformed the payment pain experience for Indian consumers. The pain of payments literature (Prelec & Loewenstein, 1998; Soman, 2003) is well-established in Western cash and credit card contexts, but has not been examined in the context of UPI-mediated Q-Commerce in India. The attenuation of payment pain through the frictionless UPI checkout flows that are architecturally central to Q-Commerce represents an unexplored but theoretically critical mechanism in the impulse buying-to-overspending pathway.

Gap 4 — Demographic Gap: Generation Z consumers in urban India — identified by Ranjekar and Roy (2023) as the primary Q-Commerce target demographic — represent an underresearched population in Indian consumer behaviour literature. With Q-Commerce platforms' sustainability concerns partially grounded in their dependence on high-frequency, low-basket-value ordering by young consumers (Ranjekar & Roy, 2023), understanding the financial behavioural consequences for Gen Z is both academically significant and of immediate policy relevance.

5.2 Central Research Problem

The central research problem is therefore: How do Q-Commerce platform stimuli interact with Generation Z consumers' psychological states to generate impulsive buying behaviour, and how do micro-transaction accumulation and pain-of-payment attenuation mediate the relationship between impulsive buying and overspending outcomes in urban India?

5.3 Research Objectives

1. To examine the key Q-Commerce platform stimuli — including urgency cues (flash deals, countdown timers, scarcity indicators), UPI payment frictionlessness, and social proof mechanisms — that drive impulsive buying behaviour among Generation Z consumers in urban India.
2. To examine impulsive buying behaviour as the central behavioural outcome, operationalised as both the urge to buy impulsively and actual impulsive purchase frequency on Q-Commerce platforms.
3. To analyse the mediating role of micro-transaction accumulation in the relationship between impulsive buying behaviour and overspending.
4. To analyse the mediating role of pain of payments attenuation — through UPI integration — in the relationship between impulsive buying behaviour and overspending.
5. To assess overspending as the cumulative financial consequence of Q-Commerce-mediated impulsive buying among Gen Z consumers.

6. Theoretical Background: The Extended S-O-B-C Model

6.1 From S-O-R to S-O-B-C: Theoretical Advancement

The Stimulus-Organism-Response (S-O-R) framework — drawing on Mehrabian and Russell's (1974) environmental psychology model and applied in Q-Commerce contexts by Ariker (2021) — posits that environmental stimuli interact with internal organism states to produce behavioural responses. While productive, this framework conflates the immediate behavioural act of impulsive buying with its cumulative financial consequences (overspending), treating both as equivalent 'responses.' The Extended Stimulus-Organism-Behaviour-Consequence S-O-B-C model used in this study is an extension of the classical S-O-R model applied in that it analytically subdivides the response term into 2 elements, including Behaviour, which is the discrete act of impulsive buying, and Consequence, which is the cumulative financial consequence of overspending. This disaggregation enables the inclusion of two mediating constructs of micro- accumulation of transactions and pain of payment attenuation as an intermediary mechanism between the behavioural manifestation and its resulting financial implications.

6.2 The Four S-O-B-C Components

6.2.1 Stimulus (S) — Q-Commerce Platform Architecture

Three primary stimulus constructs are identified: (1) Platform Urgency Cues (PUC) — flash deals, countdown timers, scarcity indicators, and push notifications that create urgency and exploit FOMO; (2) Friction-Free Payments — the perceived ease, speed, and Mental Effortlessness of UPI-based Q-Commerce checkout; and (3) Social Proof and Engagement Mechanics— user ratings, order counts, influencer endorsements, and gamified loyalty features that normalise and incentivise frequent purchasing.

6.2.2 Organism (O) — Psychological Internal States

There are three constructs that mediate the organismal level. Hedonic Motivation (HM) is characterized by the pleasure-seeking and entertainment value of browsing and purchasing Q commerce, Fear of Missing Out (FOMO) is defined as a social and temporal anxiousness that causes immediate purchase decisions under the pressure of urgency, and Self-Control Deficit (SCD) is characterized by the temporary or chronic inability to resist impulse purchases under the pressure of being in an urgent situation.

6.2.3 Behaviour (B) — Impulsive Buying Behaviour

Impulsive Buying Behaviour (IBB) is operationalised as a consolidated construct to include both the urge to buy impulsively, which is a psychological state just before buying, and the impulsive purchase behaviour itself. This dual construction is in line with the recommendation by Lee et al. (2025) of the need to take into account the impulse and its manifestation.

6.2.4 Consequence (C) — Overspending and Mediators

The relationship between IBB and the outcome construct of Overspending (OS) is mediated by two constructs, which include Micro-Transaction Accumulation (MTA) and Pain of Payments Attenuation (PPA). MTA refers to the regular attendance to high-frequency, low-value add-on buying that add up to considerable amounts of financial outflow, whereas PPA refers to the alleviation of psychological discomfort at the moment of Q-Commerce payment by means of UPI abstraction. Overspending is interpreted as systematic over-spending of self-imposed Q-Commerce spending budgets, which are gauged on a frequency, magnitude and financial remorse dimensions.

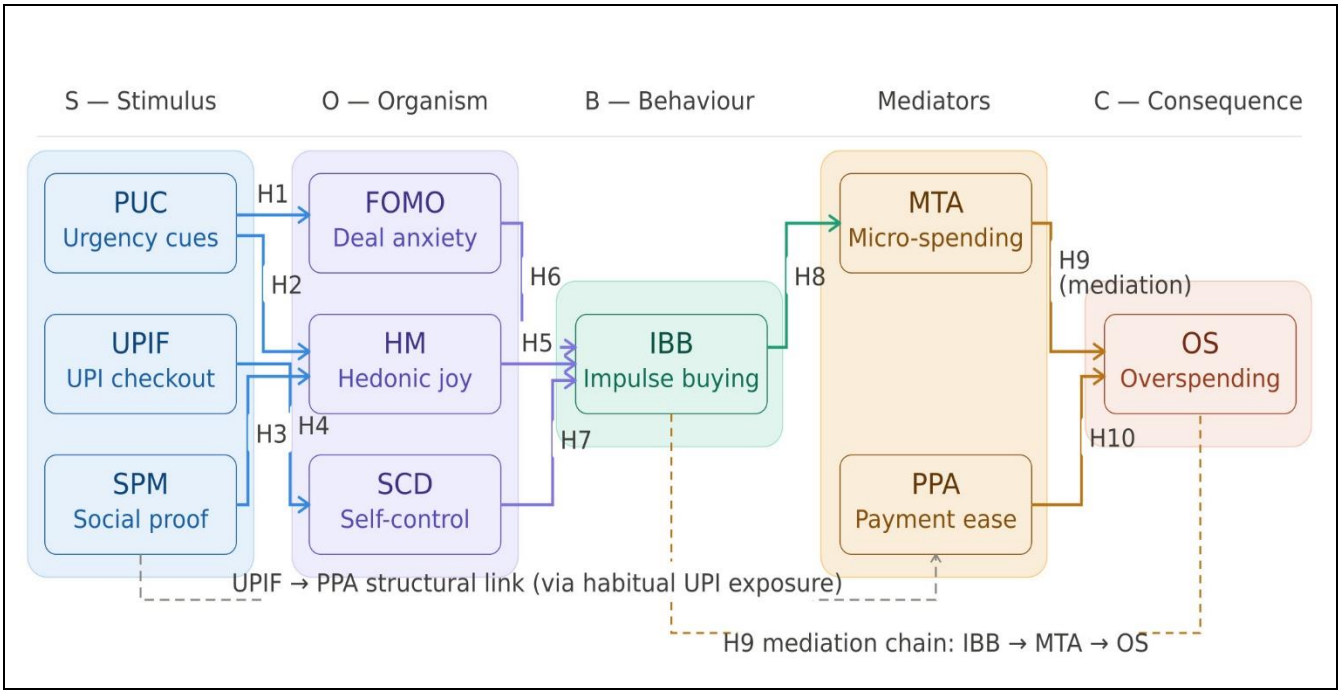
Justification for using SOBC model: Unlike prior research that focuses primarily on purchase intention or impulse buying, this study explicitly models overspending as a behavioral consequence within an extended SOBC framework.

7. Conceptual Framework & Research Model

S-O-B-C Layer	Construct	Code	Role	Items
S — Stimulus	Platform Urgency Cues/signals	PUC	Independent Variable	3
S — Stimulus	UPI Payment Frictionlessness	UPIF	Independent Variable	3
S — Stimulus	Social Proof Mechanisms	SPM	Independent Variable	3
O — Organism	Hedonic Motivation	HM	Mediating (S→B)	3
O — Organism	Fear of Missing Out	FOMO	Mediating (S→B)	3
O — Organism	Self-Control Deficit	SCD	Mediating (S→B)	3
B — Behaviour	Impulsive Buying Behaviour	IBB	Central Behavioural Variable	3
Mediator 1	Micro-Transaction Accumulation	MTA	Mediating (B→C)	3
Mediator 2	Pain of Payments Attenuation	PPA	Mediating (B→C)	3
C — Consequence	Overspending	OS	Dependent Variable	3

Table 2: Consolidated S-O-B-C construct summary (10 constructs × 3 items = 30 questionnaire items)

7.1 Structural Model Description



The structural model specifies the following pathways: (1) Platform Urgency Cues predict FOMO (S→O); (2) Platform Urgency Cues predict Hedonic Motivation (S→O); (3) Social Proof Mechanisms predict Hedonic Motivation (S→O); (4) UPI Payment Frictionlessness predicts Self-Control Deficit (S→O); (5) Hedonic Motivation predicts Impulsive Buying Behaviour (O→B); (6) FOMO predicts Impulsive Buying Behaviour (O→B); (7) Self-Control Deficit predicts Impulsive Buying Behaviour (O→B); (8) Impulsive Buying Behaviour predicts Micro-Transaction Accumulation (B→Mediator); (9) Micro-Transaction Accumulation predicts Overspending (Mediator→C); and (10) Pain of Payments Attenuation predicts Overspending (Mediator→C), with PPA conceptualised as attenuated through habitual UPI use normalised by UPIF exposure.

8. Research Variables

8.1 Stimuli (S) — Independent Variables

Variable	Code	Operationalisation	Source Literature
Platform Urgency Cues/signals	PUC	Flash deals, countdown timers, scarcity indicators, and push notifications creating urgency and exploiting FOMO	Zhu et al. (2018); Hamilton et al. (2019); Ranjekar & Roy (2023)

UPI Payment Frictionlessness	UPIF	Perceived ease, speed, and cognitive costlessness of UPI-based Q-Commerce checkout flows	Prelec & Loewenstein (1998); Meyll & Walter (2019)
Social Proof Mechanisms	SPM	Influence of user ratings, order counts, influencer recommendations, and gamified loyalty rewards on purchase decisions	Hu et al. (2019); King & Delfabbro (2018)

8.2 Organism (O) — Mediating Psychological States

Variable	Code	Operationalisation	Source Literature
Hedonic Motivation	HM	Pleasure-seeking and entertainment value derived from Q-Commerce browsing and purchasing beyond utilitarian need	Meng et al. (2020); Lee et al. (2025)
Fear of Missing Out	FOMO	Social and temporal anxiety about missing deals, peer consumption patterns, or limited-time offers on Q-Commerce	Hamilton et al. (2019); Ngo et al. (2024)
Self-Control Deficit	SCD	Temporary or chronic inability to resist impulsive purchase urges on Q-Commerce, exacerbated by frictionless payment	Baumeister (2002); Meyll & Walter (2019)

8.3 Behaviour (B) — Central Behavioural Variable

Variable	Code	Operationalisation	Source Literature
Impulsive Buying Behaviour	IBB	Combined construct capturing both the urge to buy impulsively and the frequency of actual unplanned purchase execution on Q-Commerce platforms	Stern (1962); Lee et al. (2025); Ngo et al. (2024)

8.4 Mediators between Behaviour and Consequence

Variable	Code	Operationalisation	Source Literature
Micro-Transaction Accumulation	MTA	Habitual engagement in high-frequency, low-value add-on purchases during Q-Commerce sessions that aggregate into untracked financial outflow	Petrovskaya & Zendle (2022); King & Delfabbro (2018)

Pain of Payments Attenuation	PPA	Reduced psychological discomfort at the point of Q-Commerce payment through UPI abstraction and habitual frictionless checkout	Prelec & Loewenstein (1998); Limbrick-Oldfield et al. (2022)

8.5 Consequence (C) — Dependent Variable

Variable	Code	Operationalisation	Source Literature
Overspending	OS	Systematic exceedance of self-set Q-Commerce spending budgets, measured by frequency, magnitude, and associated financial regret	Prelec & Loewenstein (1998); Meyll & Walter (2019)

9. Research Hypotheses

The following 10 hypotheses constitute the empirical core of the structural model, derived from the S-O-B-C framework and grounded in both extant literature and the Q-Commerce industry context documented by Ranjekar and Roy (2023):

9.1 Stimulus → Organism Hypotheses (S→O)

H#	Hypothesis Statement
H1	Platform Urgency Cues/signals (PUC — flash deals, countdown timers, Perceived Scarcity Cues) will have a significant positive effect on Fear of Missing Out (FOMO) among Gen Z Q-Commerce users.
H2	Platform Urgency Cues (PUC) will have a significant positive effect on Hedonic Motivation (HM) among Gen Z Q-Commerce users, as urgency-driven deals enhance perceived enjoyment and excitement.
H3	Social Proof Mechanisms (SPM — user ratings, influencer endorsements, gamified loyalty) will have a significant positive effect on Hedonic Motivation (HM) among Gen Z Q-Commerce users.
H4	UPI Payment Frictionlessness (UPIF) will have a significant positive effect on Self-Control Deficit (SCD), as reduced payment friction diminishes deliberation and weakens spending restraint.

9.2 Organism → Behaviour Hypotheses (O→B)

H#	Hypothesis Statement
H5	Hedonic Motivation (HM) will have a significant positive effect on Impulsive Buying Behaviour (IBB) in Q-Commerce.
H6	The Fear of Missing Out (FOMO) is expected to have a strong positive impact on Impulsive Buying Behaviour (IBB) in the Q-Commerce because the urgency caused by FOMO shortens deliberation and increases the chances of executing an unplanned purchase.
H7	Self-Control Deficit (SCD) will have a significant positive effect on Impulsive Buying Behaviour (IBB) in Q-Commerce.

9.3 Behaviour → Consequence Hypotheses (B→C, Direct and Mediated)

H#	Hypothesis Statement
H8	Impulsive Buying Behaviour (IBB) will have a significant positive effect on Micro-Transaction Accumulation (MTA), as habitual impulsive buying normalises high-frequency, low-value add-on purchases.
H9	Micro-Transaction Accumulation (MTA) will have a significant positive effect on Overspending (OS), such that MTA mediates the relationship between IBB and OS.
H10	Pain of Payments Attenuation (PPA) — attenuated through habitual UPI use normalised by Friction-Free Payments — will have a significant positive effect on Overspending (OS), that reduced payment discomfort predicts long-term budgetary overextension in Generation Z quick-commerce consumers.

10. Questionnaire Items (Measurement Scales)

The items were rated on a five-point Likert scale, including 1 (Strongly Disagree) to 5 (Strongly Agree). The items were based on the validated scales that were published in the literature and were localised to fit the Indian quick-commerce setting. The instrument comprises 10 constructs × 3 items = 30 items.

10.1 Platform Urgency Cues (PUC)

- PUC1: The inclusion of countdown clocks in quick-commerce apps like Blinkit and Zepto creates a perceived sense of urgency that forces people to order immediately.
- PUC2: Flash sale notifications make me add items to my cart that I had not planned to purchase.
- PUC3: The 'X items left' indicator on Q-Commerce platforms pressures me into buying quickly without thinking.

10.2 UPI Payment Frictionlessness (UPIF)

- UPIF1: Paying via UPI on Q-Commerce apps feels so quick that I rarely pause to think about how much I am spending.
- UPIF2: Instant UPI checkout makes it easier for me to make purchases I might otherwise reconsider.
- UPIF3: The speed and simplicity of UPI payment reduces my hesitation to purchase on impulse on Q-Commerce platforms.

10.3 Social Proof Mechanisms (SPM)

- SPM1: Seeing high order counts or positive ratings on Q-Commerce products makes me more likely to purchase them impulsively.
- SPM2: Influencer recommendations for products available on Q-Commerce platforms influence my unplanned purchase decisions.
- SPM3: Earning coins or rewards on Q-Commerce loyalty programmes motivates me to place more orders than I actually need.

10.4 Hedonic Motivation (HM)

- HM1: I find shopping on Q-Commerce platforms to be enjoyable and entertaining, beyond just fulfilling a need.
- HM2: Using Q-Commerce apps gives me a sense of excitement and pleasure that makes me want to explore and buy more.
- HM3: I browse Q-Commerce apps for the fun of it, often ending up purchasing things I had not planned to buy.

10.5 Fear of Missing Out (FOMO)

- FOMO1: I worry that I will miss out on good deals if I do not order from Q-Commerce apps immediately.

- FOMO2: I often make Q-Commerce purchases quickly because I am afraid the offer will not be available later.
- FOMO3: The thought of missing a Q-Commerce discount or promotion makes me uncomfortable and compels me to act fast.

10.6 Self-Control Deficit (SCD)

- SCD1: I often find it difficult to stop myself from making unplanned purchases on Q-Commerce apps.
- SCD2: Even when I decide not to order, I frequently end up placing a Q-Commerce order anyway.
- SCD3: My Q-Commerce spending often exceeds my initial intention despite my efforts to control it.

10.7 Impulsive Buying Behaviour (IBB)

- IBB1: I frequently make unplanned purchases on Q-Commerce apps that I had no intention of making before opening the app.
- IBB2: A significant proportion of my Q-Commerce orders include items added on impulse rather than prior planning.
- IBB3: I often experience a strong and sudden urge to buy something on Q-Commerce and act on it immediately.

10.8 Micro-Transaction Accumulation (MTA)

- MTA1: I regularly add small, inexpensive extra items to my Q-Commerce orders at the point of checkout.
- MTA2: The small prices of individual add-ons on Q-Commerce make it easy for me to keep adding to my cart without tracking the total.
- MTA3: I often do not realise how much I have spent on multiple small Q-Commerce purchases until I check my bank statement.

10.9 Pain of Payments Attenuation (PPA)

- PPA1: Paying via UPI on Q-Commerce feels so effortless that I barely notice I have spent money.
- PPA2: Paying for Q-Commerce orders feels much less uncomfortable than paying with cash or at a physical store.
- PPA3: Because payment is instant on Q-Commerce, I rarely feel any financial discomfort at the moment of purchase.

10.10 Overspending (OS)

- OS1: I regularly exceed the budget I set for myself for Q-Commerce spending in a given week or month.
- OS2: My actual Q-Commerce expenditure is frequently higher than what I had planned when I opened the app.
- OS3: Looking at my Q-Commerce transaction history makes me feel concerned or regretful about how much I have spent overall.

11. Research Methodology

11.1 Research Philosophy and Approach

This study adopts a positivist research philosophy, premised on the existence of an objective social reality that can be systematically measured and statistically analysed. A deductive research approach is employed, wherein theoretical hypotheses derived from the S-O-B-C framework and existing literature are tested through empirical data collection and statistical analysis. The study employs a mixed-methods research design, combining a dominant quantitative strand (survey-based PLS-SEM analysis) with a supplementary qualitative strand (in-depth interviews) to ensure both statistical rigour and contextual depth.

11.2 Research Design and Target Population

The study employs a cross-sectional survey design. The target population consisting of Generation Z consumers (born 1997–2012) living in Tier-1 urban city in India — specifically Delhi-NCR, Mumbai, Bengaluru, Hyderabad, Chennai, Pune, and Kolkata — who have made at least one Q-Commerce purchase in the previous three months. A purposive sampling strategy will recruit respondents through Q-Commerce platform user communities on facebook,Linkedin,Instagram, Reddit India, and WhatsApp

11.3 Survey Instrument

The main survey tool will consist of 30 Likert-scale items that will be distributed among ten different constructs and will be preceded by a screening section that will evaluate the Q-Commerce usage eligibility, and then a demographic section that will collect data on age, gender, city, monthly income, the main Q-Commerce platform used, and average weekly Q-Commerce spending. The instrument will be given in English with a Hindi translation to be given to respondents who may need it. A pilot study will be carried out on thirty respondents before full deployment.

12. Data Analysis Techniques

12.1 Descriptive and Preliminary Analysis.

The sample will be characterised by descriptive statistics. The Common Method Variance (CMV) will be measured using the Single Factor Test by Harman. Missing data will be handled using multiple imputation in which the rates are less than 5%.

12.2 PLS-SEM Measurement Model

The main tool will be Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4.0. The measurement model will be evaluated on: (1) Indicator Reliability > 0.70; (2) Construct Reliability Composite Reliability (CR) > 0.70; (3) Convergent Validity AVE > 0.50; and (4) Discriminant Validity HTMT ratio < 0.85 (Henseler et al., 2015).

12.3 Structural Model Evaluation.

Evaluation of the structural model will be done by: (1) Path coefficient significance: bootstrapping with 5,000 subsamples; (2) Variance Explained (R2) of the endogenous constructs; (3) Effect Size (f2) of each path; (4) Predictive Relevance (Q2) by blindfolding; (5) Model Fit: SRMR < 0.08. H9 and H10 will be analyzed through mediation, which will involve the bootstrapped indirect effects process (Hair et al., 2019).

Conclusion

This PhD proposal advances an extended S-O-B-C model to examine Q-Commerce-induced impulsive buying and overspending among urban Indian Gen Z consumers, addressing key gaps via novel mediators like micro-transaction accumulation and UPI-driven payment pain attenuation.

Activity Schedule (Duration: 36 Months)				
Phase	**Duration**	**Activity**	**Description**	**Deliverable**
1	Month 1–3	Problem Identification & Literature Review	Identify research gaps; review key works on Platform Urgency Cues/signals UPI Payment FrictionlessnessSocial Proof Mechanisms Fear of Missing Out Self-Control Deficit Impulsive Buying Behaviour Micro-Transaction Accumulation Pain of Payments Attenuation Overspending	Annotated bibliography, Conceptual framework
2	Month 4–5	Finalization of Research Objectives, Variables, Hypotheses	Finalize constructs and hypothesis development	Research Framework, Hypotheses document
3	Month 6–8	Instrument Design & Validation	Develop questionnaire items; pilot testing (Cronbach alpha, validity)	Validated Questionnaire
4	Month 9–11	Sampling Design & Ethical Approval	Define population, sample size; obtain IRB/ethics clearance	Sampling report, Ethical Approval Letter
5	Month 12–16	Data Collection (Mixed Method)	Survey distribution (quant); In-depth interviews (qual)	Raw dataset
6	Month 17–19	Data Cleaning & Pre-processing	Missing value check, outliers, normality	Cleaned & coded data
7	Month 20–23	Data Analysis (SPSS/AMOS/SmartPLS/ATLAS.ti)	Descriptive, EFA/CFA, SEM, Mediation, Moderation, Thematic coding	Analytical results
8	Month 24–26	Interpretation & Discussion	Connect findings with past studies; theoretical implications	Result chapter draft
9	Month 27–30	Thesis Writing (Drafting Chapters)	Chapter 1 to Chapter 5 writing	Full Draft Thesis
10	Month 31–33	Final Review, Feedback, and Revision	Inputs from supervisor and peers	Final thesis after revisions
11	Month 34–36	Pre-submission, Viva Preparation, and Submission	Final formatting, plagiarism check, mock viva	Thesis submission & Viva Voce

Gantt Chart (Horizontal Bar Chart View)											
Activity	**M1–3**	**M4–5**	**M6–8**	**M9–11**	**M12–16**	**M17–19**	**M20–23**	**M24–26**	**M27–30**	**M31–33**	**M34–36**
Problem Identification & Lit Review	■■■										
Objective & Hypotheses Formation		■■									
Instrument Design & Validation			■■■								
Sampling & Ethical Approval				■■							
Data Collection					■■■■						
Data Cleaning						■■■					
Data Analysis							■■■				
Interpretation & Discussion								■■■			
Thesis Writing									■■■		
Final Review & Revision										■■■	
Submission & Viva											■■■

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